MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2015/2016

MVR 2043 – SIMULATION SCRIPTING

(All sections / Groups)

9 MARCH 2016
2.30 p.m - 4.30 p.m
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This Question paper consists of 4 pages with 10 Objective Questions and 5 Subjective Questions only.

2. Answer **ALL** questions. All objective questions carry equal marks and the distribution of the marks for each subjective questions are given.

3. Please print all your answers in the Answer Booklet provided.

Objective Questions

The following questions refers to the book 'Simulation – The Engine behind The Virtual World' by Roger Smith

1. What is the **Definition** of Simulation by Roger D. Smith (1998)?
   A. The process of designing a model of a real or imagined system and conducting experiments with that model
   B. An attempt to model a real-life or hypothetical situation on a computer
   C. A relation between state transition systems in computer science
   D. To copy various activities from "real life" in the form of a game

2. Which one of these can be properly summarized as the **Purpose** of Simulation?
   A. To enable real life games to be made as real looking as possible
   B. To allow the analysis of a system's capabilities, capacities, and behaviors without requiring the construction of or experimentation with the real system
   C. To allow entering a virtual environment to visualize life in an alternate reality
   D. To enable the creation of artificial intelligence

3. Which one of these are **Not** the common applications of Simulation?
   A. Entertainment
   B. Design
   C. Fashion
   D. Training

The following questions refers to the Game Development Software 'Unity'

4. "The process collects the Render Meshes and Terrains of all Game Objects which are marked as Navigation Static, and then processes them to create a navigation mesh that approximates the walkable surfaces of the level."
The above description is clearly suited for which **Feature** in Unity?
   A. Creating Off-Mesh Links
   B. Using NavMesh Agent with Other Components
   C. Creating Terrain
   D. Building a NavMesh

5. NavMesh Agents requires a particular **Component** which is determined by a Vector3 typed variable and determines its end path. What is that component?
   A. Auto Braking
   B. Radius
   C. SetDestination
   D. Acceleration

Continued .....

6. 'Float currentSpeed;' is written in the script.
What is the argument to check if the currentSpeed is **more than** 0?
   A. Debug.Log(currentSpeed);
   B. If (currentSpeed >= 0)
   C. void CheckCurrentSpeed(){}
   D. if (currentSpeed > 0.0f)

7. Describe the flow of a networking game from the **Client side**.
   A. Detects Server if available -> Joins Server -> send data as client
   B. Host Server -> Join as Client -> send data as client
   C. Create Server -> Host Server -> get data from client
   D. Detects Server if available -> Send Data as client -> Joins Server

8. What is the **Function** that enables the assigning a float typed variable to a string typed component?
   A. SetActive(true)
   B. ToString();
   C. print();
   D. StartCoroutine();

9. What is the benefit of using an **UpdateDelegate** method of running functions instead of just running the function by itself?
   A. functions running under UpdateDelegate runs repeatedly for a period of time
   B. functions running under UpdateDelegate runs at the same time with Update
   C. functions running under UpdateDelegate runs at a lower processing requirement
   D. functions running under UpdateDelegate can't be stopped

10. Which of these statements are **FALSE** regarding Simulation?
   A. Vehicle Simulations help educate regarding the said vehicle
   B. Virtual Simulations are mainly for entertainment purposes
   C. Machinery Simulations are widely used in the oil and gas industry
   D. Visual Walkthrough is a type of simulation mainly used for architecture

Continued .....

Subjective Questions

1. Define the Advantages and Disadvantages of using a First Person View for a simulation application.

(6 marks)

2. Explain the advantages of using Analytics in an application.

(4 marks)

3. Explain the procedure in creating a Non Playable Character with the following behaviors:-
    a. Stand idly when not in contact with Main Character
    b. Follows when made contact with Main Character
    c. Stops in proximity of an Enemy Character
    d. Stays put when told to

(10 marks)

4. Explain the difference for developing a Simulation that is based on First Person Experiential and a Simulation that is based on controlling a simulated vehicle / machine.

(4 marks)

5. Explain the purpose for these functions in Unity:-
    a. using UnityEngine.UI;
    b. void InvokeRepeating()
    c. Off-Mesh Link
    d. void Awake()
    e. isKinematic – in RigidBody Component
    f. GetComponent<Animator>().SetInt("IntegerName",2);

(6 marks)

End of Page.